Amendments to the Claims:

1. (Cancelled)

2. (Previously Presented) The computer-readable medium according to claim 13, further comprising code segments for:

dividing a myocardium depicted on said cardiac image series into said image segments,

determining a time-intensity profile for distribution of a contrast agent in said myocardium for each of said image segments, and

determining said perfusion parameter for each of said time-intensity profiles of said image segments.

3. (Previously Presented) The computer-readable medium according to claim 13, said computer program further comprising a code segment for:

calculating a ratio of cardiac perfusion parameters derived at stress and cardiac perfusion parameters derived at rest for each image segment.

4. (Original) The computer-readable medium according to claim 3, wherein said ratio of cardiac perfusion parameters is a myocardial perfusion reserve index (MPRI).

5. (Original) The computer-readable medium according to claim 4, wherein said MPRI is calculated from relative maximum upslopes derived at rest and at stress.

6. (Original) The computer-readable medium according to claim 3, wherein said ratio of cardiac perfusion parameters is a thresholded MPRI being calculated by thresholding a ratio calculated from relative maximum upslopes derived at rest and at stress.

7. (Previously Presented) The computer-readable medium according to claim 13, wherein the one or more code segments further:

generate a display of said perfusion parameter for visualizing insufficiently perfused myocardial areas.

8. (Previously Presented) The computer-readable medium according to claim 13, wherein said one or more code segments further selects an image segment with the highest perfusion parameter value of all image segments as the image segment having normal perfusion, wherein a high perfusion parameter value is defined as good perfusion.

9. (Currently Amended) A computer-readable medium for storing thereon a processor executable computer program for non-invasive quantitative assessment of cardiac perfusion from a series of cardiac images comprising image segments, said computer program including one or more code segments which:

select at least one image segment with normal perfusion, including selecting an average metric calculated from N image segments with ~~the~~ N highest perfusion parameter values, wherein N is an integer number significantly lower than the total number of image segments, such that cardiac perfusion parameters of the remaining image segments are based on a cardiac perfusion parameter of said at least one image segment having normal perfusion.

10-11. (Cancelled)

12. (Previously Presented) The apparatus according to claim 21, wherein the at least one segment with normal perfusion is chosen according to criteria including at least one of:

an image segment with a highest maximum upslope,

an average of N segments with the highest maximum upslope, where N is an integer greater than 1,

an average of N segments which both exceed a selected threshold and have the highest maximum upslope.

13. (Previously Presented) A computer-readable medium for storing thereon a processor-executable computer program for non-invasive quantitative assessment of cardiac perfusion from a series of cardiac images comprising image segments, said computer program including one or more code segments which:

select at least one image segment with normal perfusion;

determine a maximum upslope of the at least one selected image segment with normal perfusion;

determine a maximum upslope of image segments without normal perfusion; and

normalize the maximum upslope of the image segments without normal perfusion using the maximum upslope of the at least one image segment with normal perfusion such that cardiac perfusion parameters of the segments without normal perfusion are based on a cardiac perfusion parameter of said at least one image segment having normal perfusion.

14. (Previously Presented) The computer-readable medium according to claim 13, wherein normalizing the maximum upslope of the image segments without normal perfusion includes:

determining relative maximum upslopes of the image segments without normal perfusion as a percentage of the maximum upslope of the at least one image segment with normal perfusion.

15. (Previously Presented) The computer-readable medium according to claim 13, wherein the one or more code segments further: calculate the relative maximum upslope for each of the image segments as a percentage of the maximum upslope of the at least one image segment with normal perfusion.

16. (Previously Presented) A workstation configured for quantitative assessment of cardiac perfusion, said workstation comprising:

a processor programmed to:

receive a series of cardiac images which carry perfusion information;

segment the cardiac images into a plurality of image segments;

determine a maximum upslope for each image segment;

identify at least one image segment with a highest maximum upslope, the one or more image segments with the highest maximum upslope being deemed to have normal perfusion; determine relative maximum upslope for image segments without normal perfusion as a percentage of the maximum upslope of the at least one image segment with the highest maximum upslope to generate a cardiac perfusion parameter for the image segments without normal perfusion;

a display unit which generates a display indicative of the generated cardiac perfusion parameters.

17. (Previously Presented) The method according to claim 19, wherein determining the relative perfusion parameters with a processor includes:

determining a perfusion parameter for each of the remaining image segments;

normalizing the determined perfusion parameter of each remaining segment with the perfusion parameter of the image segment with normal perfusion.

18. (Cancelled)

19. (Previously Presented) A method for quantitative assessment of cardiac perfusion from a non-invasively captured cardiac series of cardiac images comprising image segments, the method executed by a processor and comprising:

selecting at least one image segment with normal perfusion; and

determining relative cardiac perfusion parameters of remaining image segments based on a cardiac perfusion parameter of said image segment with normal perfusion, wherein the determining of the relative cardiac perfusion parameters includes:

determining a maximum upslope for each of the remaining image segments;

determining a maximum upslope of the image segment with normal perfusion; and

calculating the maximum upslope for each of the remaining image segments as a percentage of the upslope for the image segment with normal perfusion to generate the relative perfusion parameter.

20. (Previously Presented) The method according to claim 19, further including:

at least one of storing the relative perfusion parameter and generating a display indicative of the relative perfusion parameter.

21. (Currently Amended) An apparatus for non-invasive qualitative assessment of cardiac perfusion, comprising:

a processor programmed to:

(a) segment a series of cardiac images into a series of image segments of a myocardium;

(b) choose at least one of the image segments with a higher contrast agent uptake rate as a segment with normal perfusion;

(c) identify image segments with lower contrast agent uptake rates than the segments with the normal perfusion as segments with below normal perfusion;

(d) generate a perfusion parameter for segments with below normal perfusion;

(e) generate a perfusion parameter for the at least one of the image segments with normal perfusion; and

(f) normaliz~~inge~~ the below normal perfusion parameter in accordance with normal perfusion parameter;

(g) wherein steps (a)-(f) are performed on cardiac images in a stress state and in a rest state.